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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,446	03/08/2002	Satoru Tanaka	220449US2	8748

22850 7590 05/23/2006

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ALEXANDRIA, VA 22314

EXAMINER
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NGUYEN, HAU H

ART UNIT	PAPER NUMBER
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2628

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/092,446	TANAKA, SATORU	
	<b>Examiner</b>	<b>Art Unit</b>	
	Hau H. Nguyen	2628	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

1. Applicant's arguments with respect to claims 16-27 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 16-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter "APA") -- Figure 1 of the drawings and the specification (par 0004 – par 0008) in view of Accad (US 5,553,200) and Murahashi (US 5,864,652).

APA teaches an image forming apparatus (Fig. 1) for processing image data, comprising an image data processing unit (ASIC 1606) including a graphics port (par 0004, in an image processing apparatus, a memory for storing drawing data may be connected to a print engine via an ASIC connected to an AGP interface) and a peripheral device interconnection port configured to be connected to a print engine (1610); a first and second image data memories (par 0004, Mem-P and Mem-C) configured to store image data. APA further teach an ASIC used in an image forming apparatus generally has compression function and a data transfer function, there are plural paths for sending code data to its designation (par. 4). However, APA fails to explicitly teach a unit (or a bridge or a chipset). Accad teaches the invention can be implemented on any computer system or printer controller (col. 8, lines 27-29) and the CPU and main memory can be

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connected to the bus bridge instead of a bus. Accad further teaches the printer controller (Fig. 4, col. 8, line 27 to col. 9, line 40) comprising a CPU (413); main memory (415) includes a frame buffer (422) and a printer (rendering 426) connected to a chipset (405) includes a DMA (406); an I/O bus 418 also connected to the chipset 405. It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the teachings of Accad into the system of APA in order to provide central control of the devices which connected to the bus bridge because a bus bridge or chipset controls the system and its capabilities. It is the hub of all data transfer.

Although Accad and APA do not explicitly teach the compressed image data transferred from the first memory to the second memory, and the image processing unit decompresses the compressed image stored in the second memory and providing the decompressed image data to the print engine, Murahashi teaches these features. As shown Fig. 1, Murahashi teach a method of providing image data to a printer 12, comprising an image processing unit (CPU1, CPU2, and a compression/decompression processor 50), a first memory 22 and a second memory 56, wherein compressed image data is transferred from the first image memory 22 to the second memory 56 (col. 4, lines 19-27), and then from the second memory 56 to the image processing unit, wherein the image processing unit decompresses the transferred compressed image data, and outputs the decompressed image data to the print engine (col. 5, lines 22-33). Thus, it would have been obvious to one skilled in the art to combine the method as taught by Murahashi with the method as taught by APA and Accad in order to reduce the amount of memory storage of image data before printing.

As per claim 17, APA teaches the first image data memory stores compressed image data (par 0004, ASIC has a compression function and a data transfer function).

As per claim 18, APA teaches a second image data memory (par 0004, a Mem-P and Mem-C 1605), and Murahashi teaches transferring image data from the first memory to the second memory via an interface 17 (Fig. 1).

As per claim 19, as cited above, Murahashi teaches the image data processing retrieves compressed data from the second memory, decompresses the compressed data, and outputs to the print engine (col. 5, lines 22-33).

Claims 20-33, which are similar in scope to claims 16-19, are thus rejected under similar rationale.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau H. Nguyen whose telephone number is: 571-272-7787. The examiner can normally be reached on MON-FRI from 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794.

The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

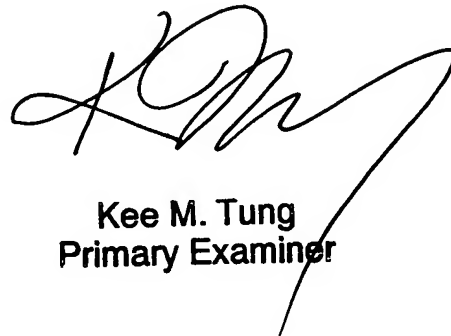
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-2 17-9197 (toll-free).

H. Nguyen

5/17/2006



**Kee M. Tung**  
**Primary Examiner**